

## Safety Advisory Committee

September 2, 2011

9:30 – 10:30 AM

### Minutes

Committee Member	Representing	Present
Anderson, Erik	Materials Sciences Division	X
Bello, Madelyn	Human Resources Advisor	
Blodgett, Paul M.	Environment, Health and Safety Division	X
Cademartori, Helen	Information Technology Division	X
Carithers, William	Physics Division	X
Christensen, John N.	Earth Sciences Division	X
Earnest, Thomas N.	Physical Biosciences Division	X
Floyd, Jim	Safety Advisory Committee Chair	X
Franaszek, Stephen	Genomics Division	
Fujikawa, Brian	Nuclear Science Division	X
Ji, Qing	Accelerator & Fusion Research Division	
Lukens Jr., Wayne W.	Chemical Sciences Division	X
Lunden, Melissa	Environmental Energy Technologies Division	X
Martin, Michael C.	Advanced Light Source Division	X
More, Anil V.	Office of the CFO Advisor	
Taylor, Scott E.	Life Sciences Division	X
Tucker, Eugene	Facilities Division	X
Thomas, Patricia M.	Safety Advisory Committee Secretary	X
Walter, Howard	Computing Sciences Directorate	
Wong, Weyland	Engineering Division	X

**Others Present:** Paul Alivisatos, Brandon DeFrancisci, Douglas Fleming, Howard Hatayama, Julie Henderson, David Kestell, Jim Krupnick, Aundra Richards, Rebecca Rishell, Scott Robinson, Andreas Schmid, David Shuh

### Annual Discussion with Laboratory Director

Committee Chair Jim Floyd presented the Committee's activities and accomplishments for FY11.

### Hazard Control Programs

The Committee worked collaboratively with the Environment, Safety and Health (EHS) Division on 3 hazard control programs: welding safety, interlocks, and electrical safety.

- For welding safety, a risk-based system was adopted. Welding was addressed in PUB-3000, while other types of thermal cutting or joining,

such as glass blowing and soldering, are addressed in Job Hazards Analyses.

- For interlock safety, an interlock engineer has been hired and works for EHS Division on radiation protection and laser interlocks. Dr. Alivisatos asked whether the interlock systems are typically commercial systems or developed by LBNL. The designs for interlock systems are project-specific. LBNL designs interlock systems utilizing commercial components. Interlock systems may have programmable logic control systems.
- For electrical safety, a distinction has been made between electrical equipment safety, with Engineering Division taking the lead, and electrical worker safety, with EHS Division taking the lead.

### **Laser Incident Management Plan**

The Laser Safety Subcommittee worked with the Laser Safety Officer to develop a laser incident management plan. The plan resulted from lessons learned from incidents at Stanford Linear Accelerator Center (SLAC) and other Department of Energy laboratories. The plan defines a process for determining the appropriate scope of shutdown, investigation process, and re-start requirements. Dr. Alivisatos asked about the status of the laser practical training facility and class. They are still under development.

### **Conduct of Operations**

The Committee worked with the Office of Contractor Assurance and DOE Berkeley Site Office to determine how to respond to a revision in the Conduct of Operations Order. Conduct of Operations should be used as a tool to achieve safe research. Aundra Richards commented that a modification to the Order is in process, and she expects that DOE will be moving to a contractor Conduct of Operations Plan system, where LBNL will be asked to describe how we are going to implement the system.

### **“Gadfly” Issues**

There were other “gadfly” issues where SAC and EHS were able to make significant progress, after some difficulty and delay: transportation of hazardous materials, access control, and electrical work authorizations. Doug Fleming commented that finding the right EHS people to lead the efforts helped them to progress more quickly.

### **Access Control**

For access control, developing the governance model is difficult. A consultant who specializes in these types of systems has provided recommendations. The governance model will determine who makes decisions about what training is

required for access to particular areas, and how the decisions will be made and implemented. Pilot systems have been tested site-wide (General Employee Radiation Training), and at the Oakland Scientific Facility, the 88" Accelerator, and the Advanced Light Source. We have some processes in place without a formal policy at this point. The goal is to develop a single structure that facility managers can use. The policy would not change the training requirements. An electronic system is needed that can handle complex situations and different populations. For example, the Molecular Foundry has different training for different floors. The Advanced Light Source has a hazards communications class that is required for over 2000 employees and users. Other areas have multiple small labs.

### **Transportation of Hazardous Materials**

Transportation of hazardous materials was the subject of several Occurrence Reports. There were questions about how to interpret Department of Transportation requirements. Facilities, EHS Division, and Transportation were all involved in different aspects of the system. The policy development is now under EHS Division leadership. Researchers are now allowed to take samples to Shipping and Receiving. A subcommittee is still working on the details. A subject matter expert will be hired.

### **SAC/EHS Interaction**

Paul Alivisatos commented that for issues where multiple groups are involved, the Kaizen process could be used to get everyone together to expedite the decision-making process.

Jim Floyd commented that while the quality of SAC work products has been good, the quantity is not what we would like it to be. The Committee would like to be more proactive in identifying issues. Some of the issues we could be more involved in developing include the working alone policy, work release process, toxic gas safety, Personal Protective Equipment policy, and sub-ORPS reporting.

SAC has been working with EHS on some program management issues. The Safety Culture survey identified some common themes, including recognition of positive safety behavior and the perception that requirements are more driven by compliance than employee safety. The response process has been going slowly, in part because of personnel changes. SAC has been working in an advisory mode. EHS is assigning a person to manage the improvement process. Some ideas about how to recognize safety behavior have been emerging from Division Self-Assessments and the Peer Reviews. The EHS Director has been working with SAC on a policy development "pipeline", and has lead strategic planning and balanced scorecard efforts.

Paul Alivisatos asked what the barriers are to getting projects done. There are many demands for EHS staff time. Doug Fleming commented that EHS has a strategic plan and that SAC needs to work with EHS to resolve any conflicts or changing needs that would require a realignment of priorities. Jim Floyd responded that SAC members are available to provide advice, they want to be involved early, and they want to see progress on issues. SAC can provide valuable feedback from Divisions that can help policies to be developed and implemented smoothly, without complaints. The new cryogen safety requirements are an example. Paul Alivisatos concluded that the SAC/EHS relationship is still evolving and needs continued scrutiny.

## **ESH Peer Reviews**

Jim Floyd described the progress that has been made in implementing the new EHS Peer Review process. Three reviews have been completed: Materials Sciences Division, Accelerator and Fusion Research Division, and Earth Sciences. The process is maturing. Division Directors want feedback on how they are doing, and advice from other Division Directors. Paul Alivisatos commented that he asked for suggestions from the Division Safety Coordinators on what Division Directors could do to improve safety, but he found the response too generic and was not convinced. He wants to use the Peer Review process to help Division Directors improve their safety programs.

## **Incident Investigation**

Paul Alivisatos asked the SAC to work on improving the incident investigation and corrective action process. He wants the Committee to look at how to push implementation of lessons learned. The questions he would like to have answered include:

- How long should an incident investigation take?
- Are we getting better at implementing Human Performance Improvement principles?
- Are we distinguishing where the problem is – the institution, management, or the individual?

Doug Fleming responded that there is a lean process on the investigation system in progress. The Human Performance Indicators piece needs attention. We want to move to a safety culture and beyond a blame culture.

Paul Alivisatos said that the results on incident investigations should be important to improving safety at the Lab as a whole. He has heard that there have been problems in how investigations are done. He directed SAC to make the investigation process a focus for FY12. He asked who manages the investigation process. Howard Hatayama commented that Line management chairs investigations and has ownership. There is a Kaizen group looking at the role of Line Management. Jim Krupnick added that investigations must follow a

Lab-wide process. Doug Fleming explained that there is a graded approach, from minor incidents that result in Corrective Action tracking to major events that require a process guided by the Office of Contractor Assurance. Paul Alivisatos asked for examples of good investigations. Jim Floyd responded that the Radiation Safety review of the ALS beamline review process went well. Paul Alivisatos asked whether LBNL knows how to do investigations well, and suggested that we should benchmark to learn best practices from other high-performance organizations. Jim Krupnick commented that we have been training more people in Operations to do Root Cause Analysis, and we may need more Human Performance training. Rebecca Rishell commented that a Lean Team is looking at the quality of analyses, and that more interface between the Lean Team and SAC is needed.

## **Safety Advisory Committee Charter**

Committee Chair Jim Floyd discussed proposed changes to the Committee charter. The changes are related to greater use of subcommittees to work on programmatic issues, and transition from Management of Environmental Safety and Health (MESH) reviews to ESH Peer Reviews. Jim Krupnick asked that his quarterly meetings with the Committee be more formal (scheduled and on the agenda).

The meeting was adjourned at 10:30 AM  
Respectfully submitted, Patricia M. Thomas, SAC Secretary